

AMENDMENT TO THE CLAIMS

1. (Currently amended) A method for measuring dielectric constant of body tissues under the skin and body impedance based on a method of frequency digital sampling and for evaluating body composition, ~~the steps comprising~~ inputting by keyboard ~~the~~ a testee's serial number, height, age, gender, and parameter indicating whether or not an athlete; ~~testee~~ standing a testee with the testees feet on the a measuring platform having a weighing sensor to measure body weight, ~~the~~ providing a body weight signal coming from the weighing sensor ~~being converted to the body weight frequency signal by~~ a weighing signal processing circuit; ~~the~~ generating oscillating frequency signals related to testee's impedances and dielectric constant of tissues under the skin ~~generating from~~ with a positive feedback RC oscillator circuit and ~~being connected~~ connecting the positive feedback RC oscillator circuit to an MCU system for frequency digital sampling; calculating body fat content and total body water by software of the MCU system, and displaying body weight, body fat content and total body water on the display, wherein ~~the said the~~ method further comprises ~~the following steps of:~~

~~converting the signal coming from the weighing sensor to~~ providing the body weight ~~frequency signals~~ from the weighing signal and processing circuit as frequency signals;

~~making~~ connecting the positive feedback RC oscillator circuit ~~connected~~ with two ends of a capacitance grid sensors to generate an oscillating frequency related to dielectric constant of body tissues under the skin by positioning testee's feet soles to contact a capacitance grid sensor on the measuring platform;

~~making~~ connecting the positive feedback RC oscillator circuit ~~connected~~ with two electrode plates or two groups of electrode plates on the measuring platform, and ~~generate~~ ing an oscillating frequency signals related to body impedance by positioning the testee's feet soles to contact the two electrode plates or two groups of electrode plates within a certain area on the measuring platform;

introducing ~~the~~ switched capacitors with different capacitance values to ~~the said~~ positive

feedback RC oscillator circuit ~~to get and obtaining~~ several oscillating signals with non-fixed different frequencies related to body impedance;
~~inputting~~ inputting the body weight frequency signals ~~through the I/O interface of the microprocessor~~ coming from the weighing signal processing circuit, the oscillating frequency signals related to dielectric constant of body tissues under the skin and body impedance signals corresponding to the non-fixed different frequencies from the switched capacitance through I/O interfaces of the MCU system;
~~through the software of the microprocessor~~ calculating from the signals provided to the I/O interface ~~thea~~ the ratio between calculating intracellular water and total body water through software of the MCU system; and
displaying the ratio between intracellular water and total body water ~~on the display~~.

2. (currently amended) The method according to claim 1, wherein: one end of the said capacitance grid sensor (C_m) in contact with testee's feet soles is connected with one end of a capacitor (C_a); and ~~the other ends of the capacitance grid sensor and capacitor are respectively connected with thean~~ output end of one inverter and an input end of the another inverter; and the input end of the one inverter is connected with thean output end of the another inverter; and wherein the oscillating frequency signals related to dielectric constant of body tissues under the skin ~~isare~~ generated.

3. (currently amended) A method according to claim 1, wherein: the input end of one inverter is connected with the output end of the ~~otheranother~~ inverter at a connection; and ~~between the joint of the two invertors and the input end of one inverter, connecting thea~~ series-wound circuit comprising bya resistor (R_a) and body impedance element (R_m) between the connection and an input end of the one inverter, is introduced; and ~~the two ends of thea capacitor (C_a) are connected respectively with the two invertors' two ends which are not connected with each other~~; an output end of the one inverter and an input end of the another inverter and wherein

oscillating frequency signals related to body impedance is~~are~~ generated.

4. (currently amended) A method according to claim 1, wherein: ~~the~~a body impedance element (R_m) is in a series connection with a first resistor R_{a2} and then in parallel connection with a second resistor R_{a1} to form a series-parallel circuit; ~~the one end of the series-parallel circuit in series-parallel connection is connected with the~~to an inverting end~~terminal~~ of ~~the~~a D trigger; and the another end of the series-parallel circuit is connected with ~~the~~a CD end, a CLK end, and a GND end of the D trigger; and wherein oscillating frequency signals related to body impedance is~~are~~ generated.

5. (currently amended) A method according to claim 1, comprising ~~the step of~~ introducing a body impedance element (R_m) to said positive feedback RC oscillator circuit; switching and introducing capacitors C_1 , C_2 , C_n respectively to said positive feedback RC oscillator circuit; ~~getting and providing~~ several oscillating signals with non-fixed different frequencies related to body impedance (R_m).

6. (currently amended) A body composition monitor apparatus for measuring dielectric constant of body tissues under the skin and body impedance based on a method of frequency digital sampling, comprising a measuring unit and a display unit, ~~which above two~~where the measuring unit and the display units comprises a measuring platform, a pair of electrode plates, a weighing sensor, a MCU system, a display, and a keyboard; wherein ~~the~~ said apparatus also includes a weighing signal processing circuit, ~~that converts the signal coming from weighing sensor to the body weight frequency signal~~, a positive feedback RC oscillator circuit for measuring a dielectric constant of body tissues under the skin and body impedance, and ~~more than one~~a plurality of capacitance grid sensors providing dielectric constant signals of body tissues under the skin to said positive feedback RC oscillator circuit, wherein:

the electrode plates form electrodes for measuring body impedance of a person standing thereon and ~~is~~being connected as a ~~two end impedance element (R_m)~~ with the

said positive feedback RC oscillator circuit to provide an impedance signal only to
said positive feedback RC oscillator circuit; and
the ~~said~~ positive feedback RC oscillator circuit, and the weighing signal processing circuit
are in electrical connection with a microprocessor of the MCU System.

7. (cancelled)

8. (currently amended) Apparatus according to claim 6, wherein: in one connection mode
of ~~the~~ said positive feedback RC oscillator circuit for measuring dielectric constant of body
tissues under the skin, one end of ~~the~~ one capacitance grid sensor (Cm) is connected with one end
of a capacitor (Ca); ~~the~~ other ends of the one capacitor grid sensor Cm and the capacitor Ca are
respectively connected with ~~the~~ an output end of one inverter and an input end of the an other
inverter; a resistor (Ra) is in series circuit connection with a body impedance (Rm), and ~~the~~ other
ends of the series circuit are respectively connected with ~~the~~ an input end and the output end of
the one inverter; the input end of the one inverter is connected with ~~the~~ an output end of the other
another inverter.

9. (currently amended) Apparatus according to claim 6, wherein: in one connection mode
of ~~the~~ said positive feedback RC oscillator circuit for measuring body impedance, ~~the~~ an input
end of one inverter is connected with the output end of ~~the~~ another inverter; connecting a series
wound circuit comprising a resistor (Ra) and the body impedance (Rm) between the joint
connection of the two invertors and ~~the~~ an input end of the inverter; ~~the~~ a series-wound circuit
comprising by a resistor (Ra) and a body impedance (Rm) is introduced; and the two ends of
~~the~~ a capacitor (Ca) are connected respectively to an output end of the one inverter and an input
end of the another inverter.

10. (currently amended) Apparatus according to claim 6, wherein: in one connection mode
of the said positive feedback RC oscillator circuit for measuring body impedance, a body

impedance (R_m) is in series connection with a first resistor (R_{a1}) and ~~then~~ in parallel connection with a second resistor (R_{a2}) to form a series-parallel circuit; ~~the one end of the series-parallel circuit in series-parallel connection is connected with the~~ an inverting end of the D trigger; and ~~the other a second end of the series-parallel circuit is connected with the~~ a CD end, a CLK end, and a GND end of the D trigger.

11-14. (cancelled)

15. (currently amended) Apparatus according to claim 6, wherein: ~~the said measuring apparatus includes an infrared signal emittingemitter circuit; an electrical signal is input from the~~ base electrode of a first audion (T1); the collectors of the first audion (T1) and a second audion (T2) are connected with one port of the infrared emitter; and the other another port of the infrared emitter is connected with a current-limiting resistor (R1); the infrared emitter ~~emit~~emitting a real-time infrared data signal; and an infrared receiver receivesreceiving the infrared instructiondata signal emitted by the said display apparatus, which is converted to an electrical signal and then ~~transmitted from the infrared receiver to the~~ base electrode of a third audion (T3); the collector of the third audion (T3) is connected with the ~~an input level of a decoder; the~~ an output level of the decoder is connected with the MCU System. of the measuring apparatus.

16. (currently amended) Apparatus according to claim 6, wherein: ~~the said display apparatusunit includes an infrared emitter comprising an infrared signal transmitting circuit; a receiver receiving the infrared signal and providing an electrical signal that is transmitted from the infrared receiver to the~~ base electrode of a first audion (T7); the collector of the first audion (T7) is connected with the ~~an interface of the MCU system of the display apparatusunit; the interface of the MCU system of the display apparatusunit sends electrical signal to the~~ an input interface of an encoder, whosethe encoder having an output interface is connected with the ~~base electrode of a second audion (T5); the collectors of the second audion (T5) and a third audion~~

(T6) are connected with one port of the infrared emitter; and ~~the other~~ port of the infrared emitter is connected with a current-limiting resistor (R4); whereby the infrared emitter emits infrared instruction signals.